

### **REMARKS**

In reply to the Office Action of November 15, 2004, Applicants respectfully request reconsideration of the above-captioned application. Claims 50, 51 and 54 have been amended, and claims 58-80 have been replaced with new claims 81-103, though there is not a one-to-one, sequential correspondence between the claims. Support for the new claims is found in previous claims 58-80 and throughout the specification. Applicants note new claim 81 recited "the casting face of the mould section is coated with subsequent layers prior to applying the first coating layer" in contrast to claim 58, for instance.

In reply to the Examiner's continued restriction between the subject matter of device claims 78 and 79 and the rest of the claims, corresponding claims have been omitted from new claims 81-103 to facilitate examination and without disclaimer to the subject matter thereof.

The Office Action in paragraph 3 objects to claim 80 as depending from a cancelled base claim. This issue has been avoided by the above. New claim 103 has been amended so that it depends from claim 41.

The Office Action in paragraph 4 also objects to claims 57 and 58 as containing typographical errors. These errors have been avoided in the above.

The Office Action In paragraph 5, the Office objects to claims 50 and 51 as using improper Markush language. Again both claims have been amended.

In Paragraph 6, the Office objects that claim 70 contains an informality. New claim 95 does not contain this informality has been amended in the enclosed amendments.

In paragraphs 8 to 11, the Office Action includes a rejection of claims 58, 62 and 74 as allegedly being indefinite. In reply claim 58 has been amended so as to make it clear that the subsequent layers are applied to the casting face of the mould section before the first coating layer is applied. In this way, the subsequent layers are not formed between the second coating layers. Claim 62 (new claim 87) has been amended to refer the "first or second coating layer", both of which are described in claim 41. Claim 74 (new claim 99) has been amended so as to make it clear that the anti-reflection stack of layers is coated over the optical element.

In paragraph 13 the Office Action includes a rejection of claims 4'-54, 58-63, 72, 73, 77 and 80 under 35 U.S.C. 103 as allegedly being unpatentable over the *Mase et al.* patent (U.S. Patent No. 5,693,366) in view of the *Soane et al.* patent (U.S. Patent No. 5,733,483). This rejection is respectfully traversed.

As noted by the Examiner, the *Mase et al.* patent discloses a method of forming a plastic lens in which a preformed lens substrate is coated with a thermoset polyurethane primer layer which is subsequently cured or dried. Then a hard coat layer is applied over the primer layer. The *Mase et al.* patent makes no suggestion whatsoever of the use of a primer layer and hard coat combination for in-mould coating. However, the Office suggests that coating the layers on to a mould in the reverse order is well known and is shown for example by the *Soane et al.* patent.

As discussed, the *Mase et al.* patent discloses the application of a primer layer to a preformed lens. The lens in the case of the *Mase et al.* disclosure is a hardened lens, and therefore there is no contemplation in the *Mase et al.* patent of any problems that may be associated with the mixing of the coating layers with the bulk lens material. However, this is a problem that needs to be dealt with in in-mould coating. In an in-mould coating procedure a liquid coating layer is applied to the mould surface and the coating layer may or may not be partially cured. Subsequently, a liquid organic lens material is introduced into the mould and is finally

cured. From a physical and a chemical point of view there is a marked difference between the interaction of a primer layer with a liquid organic lens material relative to an interaction of the same primer layer with a hardened lens material. The Mase *et al* patent teaches that a primer layer can be applied to a hardened lens material but does not provide any guidance nor suggestion that the same sort of application can be achieved through an in-mould coating process.

The Office contends that the in-mould coating processes such as the ones described in the Soane *et al* patent are common knowledge. It is submitted, that while in-mould coating processes may be known, the application of multiple coating layers in an in-mould coating process is not so well known. While the Soane *et al* patent may disclose the formation of a multiple layer coated lens through an in-mould coating process, there is no disclosure nor suggestion whatsoever in the Soane *et al* patent that an intermediary layer can be formed between a lens substrate and a hard coat in an in-mould coating process.

With respect to the coupling agent layer (32), the Soane *et al* patent at column 6, lines 18 to 21, discloses that the coupling agent has a siloxy head that reacts with the inorganic dielectric layer and an acrylate tail that is capable of bonding into another acrylate matrix. There is no discussion nor teaching in the Soane *et al* patent of how a coupling agent may interact or react with anything other than an inorganic dielectric first layer.

Embodiments of the present invention were developed in response to a need for an alternative to existing techniques for applying hard coats to lenses such as the one disclosed in the Mase *et al* patent. The process of in-mould coating overcame some of the difficulties associated with the traditional coating techniques, but at the time of the present invention, it apparently was not possible to form a lens having a highly abrasion resistant coating with good adhesion to the lens substrate using in-mould coating technique, for instance.

Development of embodiments of the present invention therefore required the development of a new procedure for applying hard coats in an in-mould coating setting. Again, development of lenses through an in-mould coating process is technically quite distinct from the development of coated lenses that are formed by coating pre-existing hardened lenses.

It is believed that these arguments are supported by the pending claims by the recitation of *inter alia* "treating the second coating layer to provide at least weak adhesion of the second coating layer to the first coating layer and to prevent damage to the second layer during subsequent steps; filling the mould with an organic liquid material; and hardening the organic liquid material so as to form the optical element adhered to the second coating layer, wherein the second coating layer is an intermediate coating layer capable of coreacting with the organic liquid material and the abrasion resistant coating layer."

In light of the foregoing, reconsideration and allowance of the present application are respectfully requested. Should any residual issues arise, the Examiner is asked to contact the undersigned at the number listed below.

Respectfully submitted,

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